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SZEWCZYK, CYNTHIA				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/568,041

**Applicant(s)**

BOHRT ET AL.

**Examiner**

CYNTHIA SZEWCZYK

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SE/US)  
Paper No(s)/Mail Date 1/1/09
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

1. 112 2nd paragraph rejections to claims 1, 2, 4, and 7-14 have been withdrawn in view of amendments.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7, 8, 12, 13, and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 7 line 2, claim 8 line 2, claim 12 line 3, claim 13 line 3, and claim 20 lines 1-2 cite glasses containing non-glass substances. The instant specification does not address the use of glasses with non-glass substances.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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6. Claim 1 recites the limitation "the glass materials" in line 11. There is insufficient antecedent basis for this limitation in the claim.
7. Claim 1 recites the limitation "the ground waste glass" in line 20. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 3 recites "the process". It is unclear whether this is referring to the method as a whole or the grinding process of step c.
9. Claim 4 recites the limitation "the mill" in line 2. There is insufficient antecedent basis for this limitation in the claim.
10. Claim 5 recites the limitation "the mill" in line 2. There is insufficient antecedent basis for this limitation in the claim.

#### ***Claim Objections***

11. Applicant is advised that should claim 11 be found allowable, claim 16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

#### ***Claim Rejections - 35 USC § 103***

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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13. Claims 1-7, 9, 10, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over HARADA (US 6,446,886 B2) in view of YANG et al. (US 5,900,037).

HARADA teaches a method for producing glass sands. HARADA discloses that waste glass (col. 1, lines 8-10) is crushed (col. 1, lines 46-48) and freed from rough impurities (col. 1, lines 60-63). Since the source for the waste glass of HARADA (used glass bottles col. 4, lines 23-25) is the same as the instant specification (page 9 lines 11-13), it can be expected that the waste glass of HARADA would include CSP impurities. HARADA discloses that the crushed waste glass is then ground further (col. 1, lines 65-67) and sieved (col. 1, line 67 – col. 2, lines 1-2) so that oversized particles are sent back for further milling (col. 2, lines 14-17). HARADA discloses that the grinding is accomplished by a glass-on-glass grinding process (col. 2, lines 10-12) as in instant claim 1. HARADA discloses that the glass is ground to a specified grain-size of less than 1 mm (col. 8, lines 50-51) which would fall into the range of instant claims 1 and 9. HARADA is silent to using the glass produced through orifices for mineral wool.

YANG et al. teaches a method and apparatus for producing mineral wool. YANG et al. discloses that the molten raw material is fed into a spinner with a peripheral wall that comprises a multiplicity of orifices with small diameters wherethrough the molten material is spun off in the form of filaments which are subjected to a supplementary attenuating effect of gas (abstract) as in instant claims 1 and 9. YANG et al. discloses that the orifices have a diameter of 1-3 mm, which would overlap with the range of instant claims 1 and 9.

It would have been obvious to one of ordinary skill in the art that the ground material obtained by HARADA et al could be used in the process of YANG et al. because HARADA et al. discloses that the obtained granulates could be used in the production of construction materials (col. 1, lines 24-30) and mineral wool is known for use as a construction material. YANG et al. discloses that materials of varying compositions could be used in the unit (col. 1, lines 21-22). Additionally, using recycled glass as a raw material would cut production costs and help the environment (HARADA col. 1, lines 34-37).

Regarding claims 2, 10, 15, and 19, HARADA discloses that the glass is ground to a specified grain-size of less than 1 mm (col. 8, lines 50-51) which would overlap with the ranges.

Regarding claim 3, HARADA discloses that oversized particles from the grinder are sent back for further milling (col. 2, lines 14-17) thus creating a two stage grinding process.

Regarding claim 4, figure 5 of HARADA shows that the rotary blades (45) are placed horizontally in the second crushing stage. It would have been obvious that the apparatus would have been capable of accelerating the glass to the claimed velocity range of instant claim 4 by adjusting the speed of the rotary blades. HARADA discloses that the glass particles are transferred to an impact chamber (col. 7, lines 1-6, 13-16) and is then sieved out (col. 8, lines 14-20) and oversized particles are returned to the beginning of the process (col. 8, lines 55-60).

Regarding claim 5, HARADA discloses that the mill uses a centrifugal force to crush the glass fragments (col. 6, lines 63-66) (centrifugal mill of instant claim 5).

Regarding claim 6, it would have been obvious to one of ordinary skill in the art that waste glass material is contained in the impact chamber because waste glass material is passed through the primary and secondary crushing devices, therefore it would be waste glass material leaving the secondary crushing device into the impact chamber.

Regarding claims 7 and 20, HARADA discloses that glass bottles can be used as the waste glass (col. 1, lines 19-20).

14. Claims 11 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over HARADA (US 6,446,886 B2) in view of YANG et al. (US 5,900,037) as applied to claims 1-7, 9, 10, and 14 above, and further in view of GRAINGER (US 5,758,832).

HARADA as modified by YANG et al. teaches a method of producing waste glass granulate to be used in a process to produce wool fiber. Modified HARADA is silent as to the amount of waste glass used in the wool fiber process.

GRAINGER discloses a glass recycling system. GRAINGER discloses that it is known in the art include up to about 50% of recycled glass into glass melts for glass processes (col. 3, lines 5-7). It would have been obvious to use the range of GRAINGER in the process of modified HARADA because HARADA is silent as to the percentage of recycled glass used in subsequent processes

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and because YANG et al. discloses that materials of varying compositions could be used in the unit (col. 1, lines 21-22). Therefore, the claimed invention would have been obvious.

15. Claims 8, 12, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over HARADA (US 6,446,886 B2) in view of YANG et al. (US 5,900,037) as applied to claims 1-7, 9, 10, and 14 above, and further in view of MIYOSHI et al. (US 2006/0065017 A1).

HARADA as modified by YANG et al. teaches a method of producing waste glass granulate to be used in a process to produce wool fiber. Modified HARADA discloses that the process uses waste glass such as bottles (col. 1, lines 8-9), but is silent as to what other waste glass can be used.

MIYOSHI et al. teaches a method of treating waste glass. MIYOSHI et al. discloses several sources of waste glass including bottles and flat glass from float processes (para. 0024). It would have been obvious that flat glass could have been used as the waste glass for modified HARADA because HARADA discloses the process is used for "glass articles such as glass bottles etc." (col. 2, line 41) indicating that any waste glass article may be used. Therefore, the claimed invention would have been obvious.

### ***Response to Arguments***

16. Applicant's arguments filed November 19, 2008 have been fully considered but they are not persuasive. On pages 10 and 11, the applicant



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argues that HARADA does not mill the glass to remove CSP impurities however, since HARADA discloses that the source for the waste glass (used glass bottles col. 4, lines 23-25) is the same as the instant specification (page 9 lines 11-13), it can be expected that the waste glass of HARADA would include CSP impurities. On page 11 of the arguments, the applicant agrees that HARADA teaches the steps of the instant application. Applicant argues on page 12, that it would not have been obvious to one of ordinary skill in the art to use the glass sand produced by HARADA in the process of YANG, however, HARADA et al. discloses that the obtained granulates could be used in the production of construction materials (col. 1, lines 24-30) and mineral wool is known for use as a construction material. YANG et al. also discloses that materials of varying compositions could be used in the unit (col. 1, lines 21-22) indicating that the composition produced by HARADA would be available for use in YANG. Furthermore, it is known in the prior art to use silica sand as a raw material for mineral wool, as disclosed in JENSEN (col. 3, lines 42-51).

17. In response to applicant's argument on page 11 that HARADA teaches that the glass-on-glass grinding is used to produce spherical configuration rather than to remove CSP particles, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

***Conclusion***

18. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
19. MOREY (US 4,070,273).
20. GENESTIE (US 4,583,695).
21. HANVEY JR et al. (US 6,029,477).
22. HANVEY JR et al. (US 6,199,778).
23. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CYNTHIA SZEWCZYK** whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art  
Unit 1791

CS